

*City of Wayland*  
**Annual Drinking Water Quality Report**  
**2016**



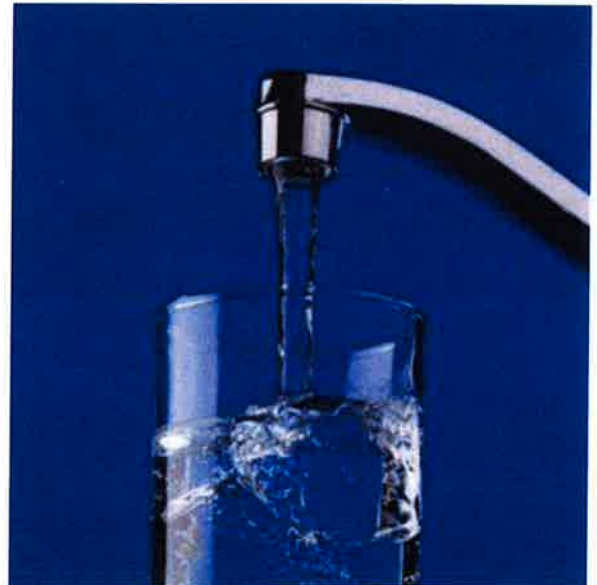
We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Our water sources are groundwater wells. Our wells draw from the Marshall and Glacial Aquifers. At each of our three well houses we add chlorine as a disinfectant, fluoride to promote healthy teeth, and a phosphate compound for corrosion control.

We have a wellhead protection program to help us protect our groundwater supply. The five steps to this program include forming a community planning team, defining the land area to be protected, identifying and locating potential contaminants, managing the protection area, and planning for the future.

The State Dept. of Environmental Quality (MDEQ) last performed an assessment of our source water in 2007 to determine the susceptibility of our source water to potential contamination. The susceptibility is on a scale from "low" to "very high" based on geologic sensitivity, water chemistry, well construction and contaminant sources. MDEQ rated the susceptibility of our wells; Well #3 is "moderate", wells 5 and 6 as "very high." To obtain a copy of the assessment report, please contact **Benjamin Bachelder at 269-792-0686**.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.



MCL's (Maximum Contaminant Level's) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The City of Wayland employs state certified professional waterworks system operators who, routinely monitor for constituents in your drinking water according to Federal and State laws. Contaminants that are tested for include:

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

**Pesticides and Herbicides**, which may come from a variety of sources such as agriculture and residential uses.

**Radioactive Contaminants**, which are naturally occurring.

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also, come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The table on the next page lists all the drinking water contaminants that were detected. EPA requires that water supplier to report the most recent sampling results

within a five-year period from January 2011 to December 2015. The detected concentration can be either below or above the state/federal safe drinking standard (also known as the Maximum Contaminant Level). If the detected concentration is above the safe drinking water standard a violation has occurred and a "YES" in bold will be indicated in the violation column. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.



In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

*Parts per million (ppm) or Milligrams per liter (mg/l)*

*Parts per billion (ppb) or Micrograms per liter*

*Action Level – (AL)* the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*Maximum Contaminant Level - (MCL)* is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

*Maximum Contaminant Level Goal – (MCLG)* is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

*Maximum Residual Disinfectant Level-(MRDL)* is the highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminates.

*Maximum Residual Disinfectant Level Goal-(MRDLG)* is the level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ND-Not Detected; N/A-Not Applicable

Inorganic Contaminants	MCL	MCLG	Our Water	Range of Detection	Sample Date	Violation	Typical source of Contaminant
Arsenic (ppb)	10	0	4	ND - 4	12/18/12	No	Erosion of natural deposits; runoff from orchards, glass & electronics production wastes
Barium (ppm)	2	2	0.18	0.07-0.18	12/18/12	No	Discharge of drilling waste and metal refineries; erosion of natural deposits
Fluoride (ppm)	4	4	0.82	0.70-.82	4/7/15	No	Erosion of natural deposits; water additive that promotes strong teeth
Nitrates (ppm)	10	10	3.1	ND – 3.1	4/7/15	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Volatile Organic Compounds	MCL	MCLG	Our Water	Range	Sample Date	Violation	Typical source of contaminant
TTHMS (total trihalomethanes) (ppb)	80	0	7.9	NA	8/17/15	No	By-product of drinking water chlorination

Chlorine Residual Data							
	MDRL	MDRLG	Highest Running Average	Result Range	Running Annual Average	Violation Yes/No	Typical source of containment.
Chlorine Residual (ppm)	4	4	0.455	0.25-0.455	0.355	No	By-product of drinking water chlorination
Lead/ Copper	AL	MCLG	Our Water 90% of samples ≤ this level	# of Sites Exceeding AL	Sample Date	Violation	Typical source of Contaminant
Lead (ppb)	15	0	2.0	0	8/20/15	No	Corrosion of household plumbing
Copper (ppb)	1300	1300	1151	1	8/20/15	No	Corrosion of household plumbing
Special Monitoring	MCL	MCLG	Our water	Range of Detection	Sample Date	Violation	Typical source of Contaminant
Sodium (ppm)	N/A	N/A	11	9-13	4/7/15	No	Erosion of natural deposits

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Wayland is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://water.epa.gov/drink/info/lead>.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilsons disease should consult their personal doctor.

As you can see from the table on the previous page, our system had no violations. We are proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected; however, our water meets safe drinking water standards.

If you have any questions about this report or concerning your water utility, please contact **Ben Bachelder** Superintendent of Water at (269) 792-0686. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held at City Hall on the first and third Monday of each month at 7:00 PM.

- COPIES OF THIS REPORT ARE AVAILABLE AT CITY HALL
- THIS REPORT IS ALSO POSTED ON THE CITY'S WEBSITE @[www.cityofwayland.org](http://www.cityofwayland.org)